

Facility Name: **Wolf Creek Landfill**

City: Dry Branch

County: Twiggs

AIRS #: 04-13-289-00011

Application #: 642635

Date SIP Application Received: March 14, 2022

Date Title V Application Received: March 14, 2022

Permit No: 4953-289-0011-V-04-2

Program	Review Engineers	Review Managers
SSPP	Cynthia Dorrough	James Eason
SSCP	Kenneth Phillips	n/a
ISMU	Joanna Pecko	Dan McCain
TOXICS	Kenneth Phillips	n/a
Permitting Program Manager		Stephen Damaske

## Introduction

This narrative is being provided to assist the reader in understanding the content of the referenced SIP permit to construct and draft operating permit amendment. Complex issues and unusual items are explained in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Sections 391-3-1-.03(1) and 391-3-1-.03(10) of the Georgia Rules for Air Quality Control, (2) Part 70 of Chapter I of Title 40 of the Code of Federal Regulations, and (3) Title V of the Clean Air Act Amendments of 1990. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public comment period and EPA review process will be described in an addendum to this narrative.

## I. Facility Description

### A. Existing Permits

Table 1: Current Title V Permit and Amendments

Permit/Amendment Number	Date of Issuance	Description
4953-289-0011-V-04-0	1/13/2017	Title V Renewal
4953-289-0011-V-04-1	12/9/2021	Installation a 3,000 scfm open flare.

### B. Regulatory Status

#### 1. PSD/NSR/RACT

The ADS Renewable Energy – Wolf Creek landfill gas to energy (LFGTE) facility is located within the landfill site. The LFGTE facility is owned and operated by Advanced Disposal Services Renewable Energy, LLC. This LFGTE facility has two spark-ignition, internal combustion engines powered by landfill gas and is issued the Title V permit No. 4911-289-0013-V-02-0 on March 17, 2017. The LFGTE facility is part of the same Title V site as the landfill since the engines are fired with landfill gas only. The landfill was estimated to generate 274 Mg of NMOC for 2021.

The combination of Wolf Creek Landfill and ADS Renewable Energy – Wolf Creek is a minor source under PSD regulations. Emissions of all PSD regulated pollutants are less than the major source threshold of 250 tons per year. It should be noted that LFG burned in the flares cannot be burned in the generator engines and vice versa. Landfills and LFG powered electricity generating facilities are not included in the list of 28 source categories that have a 100 tpy threshold to be subject to PSD regulations.

#### 2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the Pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Y			✓
PM <sub>10</sub>	Y			✓
PM <sub>2.5</sub>	Y			✓
SO <sub>2</sub>	Y			✓
VOC	Y			✓
NO <sub>x</sub>	Y			✓
CO	Y	✓		

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SIP CONSTRUCTION PERMIT AND TITLE V SIGNIFICANT MODIFICATION APPLICATION REVIEW

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TRS	N			✓
H <sub>2</sub> S	Y			✓
Individual HAP	Y			✓
Total HAPs	Y			✓

## II. Proposed Modification

### A. Description of Modification

Wolf Creek Landfill is increasing its disposal capacity through the addition of approximately 104 acres for future disposal. This addition will result in an increase of 13,285,000 cubic yards of disposal capacity. This expansion is considered a modification; therefore, the facility is subject to applicable provisions of 40 CFR 60 Subpart XXX, Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014.

### B. Emissions Change

The emissions increase associated with this modification was calculated based on the landfill emissions conservatively calculated for highest project emissions year 2026 during the permit term plus the emissions from the 3,000 scfm flare at its maximum design capacity. Emission factors for HAP were compiled from AP-42 and Section 112 of the Clean Air Act.

<b>Pollutant</b>	<b>Is the Pollutant Emitted?</b>	<b>Annual Emissions Summary Landfill + Flare (tpy)</b>
PM	Y	6.69
PM <sub>10</sub>	Y	6.69
PM <sub>2.5</sub>	Y	6.69
SO <sub>2</sub>	Y	88.18
VOC	Y	109.43
NO <sub>x</sub>	Y	27.13
CO	Y	123.67
TRS	N	--
H <sub>2</sub> S	Y	14.36
Individual HAP	Y	3.09
Total HAPs	Y	9.43

### C. PSD/NSR Applicability

The landfill is currently minor for Prevention of Significant Deterioration (PSD) and will remain minor for PSD classification. Because the site will remain minor for PSD, GHG permitting, which includes the impact of fugitive emissions, does not apply.

### III. Facility Wide Requirements

#### A. Emission and Operating Caps:

None Applicable

#### B. Applicable Rules and Regulations

##### **40 CFR 60 Subpart WWW – Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification on or After May 30, 1991, but Before July 18, 2014**

This rule is applicable to each municipal solid waste landfill that has a design capacity greater than 2.5 million megagrams (Mg) or 2.5 million cubic meters (m<sup>3</sup>), if the landfill commenced construction, reconstruction, or modification on or after May 30, 1991. Wolf Creek Landfill has a design capacity (approximately 15 million cubic yards) exceeding 2.5 million cubic meters and was modified after May 30, 1991. Since the NMOC emission rate calculation using Tier 2 or 3 exceeded the Subpart WWW threshold of 50 Mg per year in 2016, a landfill gas collection and control system (GCCS) was required to be installed. Therefore, the facility submitted a GCCS design plan to apply the regulatory requirements to the existing voluntary GCCS and the proposed final design.

Prior to the modification of the landfill to increase disposal capacity, the landfill was subject to NSPS, 40 CFR 60 Subpart WWW.

##### **40 CFR 60 Subpart XXX - Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014**

This rule is applicable to to each municipal solid waste landfill that commenced construction, reconstruction, or modification after July 17, 2014. Physical or operational changes made to an MSW landfill solely to comply with subparts Cc, Cf, or WWW of this part are not considered construction, reconstruction, or modification for the purposes of this section. The proposed modification of this landfill is not for the purpose of complying with Subparts Cc, Cf or WWW, therefore the facility will be subject to Subpart XXX upon the commencement of base grade construction, the Landfill will become subject to NSPS Part 60 Subpart XXX.

##### **40 CFR 62 Subpart OOO, “Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014**

The Landfill is currently subject to 40 CFR 62 Subpart OOO, “Federal Plan Requirements for Municipal Solid Waste Landfills That Commenced Construction On or Before July 17, 2014 and Have Not Been Modified or Reconstructed Since July 17, 2014,” until Georgia Rule 391-3-1-.02(2)(ggg), “Existing Municipal Solid Waste Landfills,” becomes an EPA-approved and currently effective state plan implementing 40 CFR 60 Subpart Cf.

Increasing the disposal capacity by 13,285,000 cubic yards meets the definition of a modification as outlined in 40 CFR 60.761. A modification is defined as *“an increase in the permitted volume design capacity of the landfill by either lateral or vertical expansion based on its permitted design capacity as of July 17, 2014. Modification does not occur until the owner or operator commences construction on the lateral or vertical expansion.”*. The Landfill is currently subject to Federal Plan subpart OOO. However, upon the commencement of base grade construction for the proposed landfill expansion, the Landfill will become subject to NSPS Part 60 Subpart XXX

C. Compliance Status

The permit application did not indicate any noncompliance issues.

D. Permit Conditions

Permit Condition 2.2.1 was modified to remove reference to NSPS Subpart WWW and establishes the applicability of 40 CFR 60 Subparts A and XXX to the landfill.

#### IV. Regulated Equipment Requirements

##### A. Brief Process Description

The Wolf Creek Landfill receives, manages, and disposes of municipal and industrial solid waste, construction, and demolition waste. The waste is deposited directly into the landfill and then covered with soil. The facility is currently not required to install GCCS, based on NMOC Tier 2 calculations. However, the landfill has installed a non-regulated (voluntary) gas collection and control system (GCCS) for landfill gas-to-energy and greenhouse gas reduction purposes.

The GCCS includes a 3,000-scfm open flare and a LFGTE facility with treatment system as the control devices for the LFG collected.

##### B. Modified Equipment List for the Process

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
0001	Landfill	40 CFR 60, Subpart A 40 CFR 60, Subpart XXX 40 CFR 62, Subpart OOO**** 40 CFR 61, Subpart A** 40 CFR 61, Subpart M** 40 CFR 63, Subpart A*** 40 CFR 63, Subpart AAAA*** 391-3-1-.02(2)(n)	CD01	2,000 scfm open flare and gas collection and control system
			CD02	3,000 scfm open flare and gas collection and control system

\* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards are intended as a compliance tool and may not be definitive.

\*\* 40 CFR 61 requirements are potentially applicable, if the facility accepted asbestos containing industrial waste.

\*\*\* 40 CFR 63 requirements are not currently applicable but could become applicable during the permit term if the facility is required to install a GCCS or becomes a bioreactor.

\*\*\*\*Site is subject to Federal Plan OOO prior to it commencing the modification that triggers NSPS XXX.

##### C. Equipment & Rule Applicability

The proposed modification removes the applicability of Part 62 Subpart OOO from the landfill upon the commencement of base grade construction. Applicability of NSPS Subpart XXX is addressed in Section III of the narrative.

##### D. Permit Conditions

Permit Condition 3.3.2 was removed because Federal Rule Part 62 Subpart OOO is no longer applicable to the landfill.

**V. Testing Requirements (with Associated Record Keeping and Reporting)**

Permit Condition 4.2.1 states that the facility must determine the NMOC emission rate using the equations in Permit Condition 4.2.2 and constants in Permit Condition 4.2.3.

Permit Condition 4.2.4 states the sampling procedures to be followed for collecting samples for Tier 2 or Tier 3 testing for calculating NMOC emissions.

Permit Condition 4.2.5 requires the facility to conduct Tier 2 testing to determine the site-specific NMOC concentration using the procedures specified in Condition 4.2.4. Tier 2 testing must be conducted each five years.



## **VII. Other Record Keeping and Reporting Requirements**

NSPS Subpart XXX requires landfills to determine their NMOC emission rate annually. If the NMOC emissions exceed 34 megagrams per year, the landfill must either re-calculate emissions at a higher tier (e.g., move from Tier 2 to Tier 3) or submit a Collection and Control System (GCCS) design plan that has been prepared by a Professional Engineer. The landfill is no longer required to calculate annual NMOC emissions once a landfill gas collection system meeting the requirements of Subpart XXX is being used. Subpart XXX also requires the landfill to keep accessible records of design capacity and waste in place and may exclude areas containing nondegradable waste from the GCCS if sufficient records are kept.

Permit Conditions 6.2.1 through 6.2.3 include the requirements for submitting annual NMOC emission rate reports and the procedures to be taken when a NMOC emission rate report exceeds 34 megagrams per year (i.e., calculate emissions by a higher tier or submit a GCCS design plan).

Permit Condition 6.2.4 states that a NMOC emission report is not required after a GCCS, which meets the requirements of Subpart XXX, has been installed.

Permit Condition 6.2.5 requires that the facility keep records of the maximum design capacity of the landfill, the current amount of solid waste in place, and the year-by-year waste acceptance rate.

Permit Condition 6.2.7 contains requirements for excluding areas of the landfill from the GCCS design when it is required, which contain nondegradable waste.

Permit Condition 6.2.8 contains an allowance for excluding any nonproductive area of the landfill from the GCCS design. The Permittee may exclude an area if an NMOC emission from that area is less than 1 percent of the landfill's total NMOC emissions.

Permit Condition 6.2.15 requires a report when the landfill stops accepting waste to close the landfill.

**VIII. Specific Requirements**

A. Operational Flexibility

Not applicable.

B. Alternative Requirements

Not applicable.

C. Insignificant Activities

Not applicable.

D. Temporary Sources

Not applicable.

E. Short-Term Activities

Not applicable.

F. Compliance Schedule/Progress Reports

Not applicable.

G. Emissions Trading

Not applicable.

H. Acid Rain Requirements/CAIR/CSPAR

Not applicable.

I. Prevention of Accidental Releases

Not applicable.

J. Stratospheric Ozone Protection Requirements

Not applicable.

K. Pollution Prevention

Not applicable.

L. Specific Conditions

Not applicable.

**Addendum to Narrative**

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//